

**REMARKS**

Claims 1-33, as amended, and new claims 39-42 are pending in this application. In this Response, Applicants have amended certain claims. In light of the Office Action, Applicants believe these amendments serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicants respectfully submit that the claim amendments do not limit the range of any permissible equivalents.

In particular, independent claims 1, 4, and 8 have been rewritten to further clarify the embodiments of the present invention recited therein. Dependent claims 12-13 have been rewritten to recite additional embodiments of the present invention, which are supported by the Specification at page 12, lines 20-23. Claims 39-42 have been added to recite an additional embodiment of the present invention, which is supported by the Specification at page 6, lines 24-25 and original claims 5-7.

As no new matter has been added, Applicant respectfully requests entry of these amendments at this time.

**RESTRICTION REQUIREMENT**

Applicants appreciate the Examiner's withdrawal of the ten-way restriction mailed in the office action dated October 2, 2002. As understood by the Applicants, claims 1-33 and 37 are currently being considered by the Examiner and, thus, the previous election by the Applicants is also withdrawn.

**THE REJECTION UNDER 35 U.S.C. § 112**

Claims 12-13 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons set forth on pages 2-3 of the Office Action. In response, claims 12-13 have been rewritten to avoid any antecedent issues. As such, Applicant believes the § 112 rejection has been overcome and respectfully requests reconsideration and withdrawal thereof.

**THE REJECTION UNDER 35 U.S.C. § 102*****Sullivan Does Not Disclose or Suggest the Present Invention***

Claims 1, 4, 8, and 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,100,336 to Sullivan *et al.* for the reasons stated on page 3 of the Office

Action. Sullivan does not disclose or even suggest the present invention for the reasons that follow.

Sullivan generally discloses golf ball covers formed from blends of high or low acid copolymers with ethylene alkyl acrylates, e.g., ethylene ethyl acrylate (EEA) and ethylene methyl acrylate (EMA). See, e.g., Col. 3, lines 15-18. As a basis for rejecting claims 1, 4, 8, and 18, the Examiner cites Sullivan's brief suggestion that an interpenetrating polymer network (IPN) *might* be formed by reacting (neutralizing) the acid copolymer in the presence of EEA / EMA. Col. 27, lines 16-19. Sullivan does not teach the mechanism behind the formation of such an IPN, nor does Sullivan even suggest a non-ionomeric IPN.

In contrast, independent claims 1 and 4 recite non-ionomeric materials for inclusion in the IPN and independent claim 8 features a semi-IPN that is non-ionomeric in nature. For example, independent claim 4 recites a non-vulcanizable, non-aromatic, or non-ionomeric polymer network formed from specific non-ionomeric materials.

As such, Applicant respectfully submits that Sullivan does not disclose or suggest the present invention. Thus, Applicant respectfully requests reconsideration and withdrawal of the § 102 rejection based thereon.

McGarry Does Not Anticipate the Present Invention

The Examiner rejected claim 37 under § 102(b) as being anticipated by U.S. Patent No. 5,362,799 to McGarry *et al.* as provided on page 3 of the Office Action. In light of the cancellation of claim 37, Applicants respectfully submit that the rejection of this claim is moot.

THE REJECTIONS UNDER 35 U.S.C. § 103

Claims 1-33 were rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,879,244 to Hwang in view of McGarry. Applicants respectfully submit that this combination of references does not render obvious the present invention for the reasons that follow.

Hwang is generally directed to a golf ball having an inner cover and an outer cover formed of organic polymeric materials such as ionomer resin, polyurethane resin, thermoplastic polyester resin, rubber, and other thermoplastic resins, used alone or in a mixture of more than two kinds. Col. 4, lines 46-61.

As recognized by the Examiner, Hwang does not even suggest an IPN. In fact, the Hwang reference merely teaches a *blend* or *mixture* of the organic polymeric materials by providing that the disclosed materials may be "used alone or in a *mixture* of more than two kinds." Col. 4, lines 54-61. Blends of polyester resins and ionomer resins or polyurethane resins, such as those suggested by Hwang, are merely physical blends without any significant reactions or polymerization taking place. In fact, any polymerization required to form the organic polymeric material is complete prior to blending.

In contrast, an IPN is the result of a physical entanglement of at least two polymer systems (or components) that are independently polymerized, *i.e.*, there is no reaction between the two polymer systems. For example, a full IPN, as defined in the Specification, involves two or more polymers that are polymerized simultaneously such that the reactions of the two polymer networks do not substantially interfere with each other. Specification at page 10, lines 8-12. Thus, an IPN includes predominantly only same-type polymer linkages, *i.e.*, crosslinks between polymer chains made from the same precursor package. Specification at page 11, lines 26-30.

The Examiner relies on McGarry in an attempt to cure the deficiencies of the primary reference with respect to the lack of disclosure relating to an IPN. There is no motivation, however, contrary to the Examiner's belief, to combine Hwang and McGarry.

McGarry generally discloses an unsaturated polyester resin composition that contains an amine-terminated flexible polymer that can react with the unsaturation in the polyester. *See Abstract.* As the examples provide, the materials produced by McGarry are thermoset in nature, *i.e.*, "cured." *See* Col. 9-10, Example 1. In contrast, the organic polymeric materials of Hwang are thermoplastic in nature. A skilled artisan, aware of the many differences between thermoset and thermoplastic materials, would not look to a reference using thermoset materials for further instruction on how to process thermoplastic materials. For example, thermoplastic materials are unreactive, *i.e.*, they have no crosslinks and are reprocessable, whereas thermoset materials contain crosslinks and are not reprocessable. As such, one of ordinary skill in the art would not have been motivated to use references using different types of materials absent the present application to use as a template.

And, even assuming that such motivation existed, the combination would not result in the presently claimed invention. In fact, the use of the Hwang's thermoplastic polyester resin cannot be converted into McGarry's unsaturated polyester.

For the reasons above, Applicant respectfully submits that the combination of Hwang and McGarry does not render the present invention obvious. Thus, Applicant respectfully requests reconsideration and withdrawal of the § 103 rejection based thereon.

**NEW CLAIMS ADDED WITH THIS RESPONSE**

Claims 39-42 have been added to recite an additional embodiment of the present invention, which is supported by the present Specification. These claims are also not disclosed or suggested by the present invention for similar reasons as above. For example, Sullivan does not even suggest an IPN in an intermediate layer of a golf ball. In addition, even if one of ordinary skill in the art would have been motivated to combine the Hwang and McGarry disclosures, *arguendo*, the result would not be the golf ball recited in the newly added claims.

**CONCLUSION**

All claims are believed to be in condition for allowance. If the Examiner believes that the present amendments still do not resolve all of the issues regarding patentability of the pending claims, Applicants invite the Examiner to contact the undersigned attorneys to discuss any remaining issues.

No other fees are believed to be due at this time. Should any fee be required, however, please charge such fee to Swidler Berlin Shreff Friedman, LLP Deposit Account No. 195127, Order No. 20002.0041.

Respectfully submitted,  
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Dated: June 7, 2004

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